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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Implementation of the Local) CC Docket No. 96-98
Competition Provisions in the)
Telecommunications Act of 1996)

REPLY COMMENTS OF THE
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

Larry Irving
Assistant Secretary for
Communications & Information

Barbara S. Wellbery
Chief Counsel

Shirl Kinney
Deputy Assistant Secretary

Phyllis E. Hartsock
Deputy Chief Counsel

Timothy Robinson
Attorney

Kathryn C. Brown
Associate Administrator
Mark Bykowsky
Robert Cull
Alfred Lee
Tim Sloan
Office of Policy Analysis
and Development

National Telecommunications
and Information Administration

U.S. Department of Commerce
Room 4713
14th Street and Constitution Ave., N.W.
Washington, D.C. 20230
(202) 482-1816

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SUMMARY

In this rulemaking, the Commission will adopt rules to implement some of the most important parts of the Telecommunications Act of 1996 (Act) -- the provisions designed to foster competition in the market for local telecommunications services by requiring incumbent local exchange carriers (ILECs) (1) to interconnect with competing carriers and (2) to provide such carriers with unbundled network elements on just, reasonable, and nondiscriminatory terms. The Commission's decisions in this proceeding will determine, to a large degree, whether the nation realizes Congress' vision of a "pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans."

NTIA recommends a national policy framework with respect to interconnection and unbundling that takes advantage of the combined experience of Federal and State regulators in matters of interconnection and unbundling and -- more fundamentally -- enlists the States in the implementation of the Act's provisions. Under this approach, the Commission would establish basic minimum interconnection and unbundling standards. The minimum set of unbundled network elements, for example, should include at least four network elements -- local loops, local switching, local transport and special access, and databases and signalling systems.

Furthermore, if (1) a State commission has ordered an ILEC to provide interconnection at a particular point or to unbundle a certain network element or (2) an ILEC has voluntarily offered to provide additional interconnection or unbundling, the Commission should create a rebuttable presumption that it is technically feasible for ILECs in any other part of the country to provide that same type of interconnection or that network element to any requesting carrier. An ILEC faced with such a request would have an opportunity to persuade the relevant State commission by clear and convincing evidence that offering the requested interconnection or network element is not technically feasible. Every one or two years, moreover, the Commission should supplement its minimum interconnection/unbundling standards with additional requirements as a broader range of interconnection arrangements or network elements become more commonplace throughout the nation.

With respect to pricing, the Commission should establish a minimum set of principles governing the pricing of interconnection arrangements and unbundled network elements. Those principles define a "zone of reasonableness" within which negotiating parties may seek interconnection and unbundling rates. That zone should be defined at the bottom by TSLRIC. Its upper limit should be established through a "bottom-up" approach beginning at TSLRIC. Under this approach, an ILEC would have an opportunity to demonstrate by clear and convincing evidence that

the TSLRIC estimate should be adjusted to include additional costs that: (1) contribute to a ILEC's long run average incremental cost of the services used by an interconnector and; (2) can be justified to the regulator as being clearly incremental to the provisioning of the service or functionality at issue, but is not part of the TSLRIC estimate for that service or functionality.

The Commission should also promulgate some basic rules for State commissions as they arbitrate contested negotiations. If one or more party requests State commission arbitration concerning the rate for a given interconnection arrangement or unbundled network element, the regulator should begin by defining, consistent with the Commission's pricing principles, the upper and lower bounds of the zone of reasonableness for that item. If both parties' proposed rates lie outside of the bound, the State commission should either send the parties back for further negotiation or choose a rate that falls within the zone. If one of the proposed rates is within the zone and the other is not, the regulator could either opt for the in-band price, or allow the party who lies outside the band to make a final offer within the zone. If both offered prices are within the zone, the Commission should require that the State regulator choose either of the two prices.

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The National Telecommunications and Information Administration (NTIA), an Executive Branch agency within the Department of Commerce, is the President's principal advisor on domestic and international telecommunications and information policy. NTIA respectfully replies to comments submitted in response to the Commission's Notice of Proposed Rulemaking (Notice) in the above-captioned proceeding.^{1/}

I. INTRODUCTION

In this rulemaking, the Commission will adopt rules to implement some of the most important parts of the Telecommunications Act of 1996 (Act)^{2/} -- the provisions designed to foster competition in the market for local telecommunications services by requiring incumbent local exchange carriers (ILECs)

1/ Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, FCC 96-182 (released Apr. 19, 1996) (Notice). Unless otherwise indicated, all subsequent citations to "Comments" shall refer to pleadings filed on May 16, 1996 in CC Docket No. 96-98.

2/ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (Act).

(1) to interconnect with competing carriers and (2) to provide such carriers with unbundled network elements on just, reasonable, and nondiscriminatory terms. Other sections of the Act contemplate additional entry into markets where competition is already considerable (for example, Bell Operating Company (BOC) entry into long distance, manufacturing, and information services). In contrast, the local competition provisions -- principally Sections 251 and 252^{3/} -- are designed to stimulate entry in areas where competition is, at best, nascent and, thereby, create a process that over time will give consumers service choices where they now have few or none. The Commission's decisions in this proceeding will determine, to a large degree, whether the nation realizes Congress' vision of a "pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans."^{4/}

There are many potential benefits of a national framework governing interconnection and network unbundling (including the

^{3/} For convenience, all references to the Act in this pleading will cite to the section numbers that will apply after the Act's provisions have been codified in the United States Code.

^{4/} H.R. Conf. Rep. No. 104-458, 104th Cong., 2d Sess. 1 (1996), reprinted in 1996 U.S.C.C.A.N. 124 (Joint Explanatory Statement).

prices at which those arrangements are offered).^{5/} National rules will give negotiating parties greater certainty as to their rights and obligations under the Act.^{6/} This could, in turn, speed the bargaining process by eliminating possible areas of dispute,^{7/} and by reducing the possibility that prospective entrants may have to renegotiate or relitigate the same issues in multiple States.^{8/} National requirements also could help new entrants to develop rational business plans and network deployment schedules, thereby facilitating competitive entry and limiting its potential costs.^{9/} Finally, such rules could expedite arbitration and review of interconnection agreements by the Commission, State regulators, and the courts.^{10/}

To be fully successful, however, any national framework for interconnection and unbundling must give private parties

^{5/} Collocation is clearly part and parcel of any discussion of the term "interconnection." Accordingly, NTIA's proposed national framework for interconnection applies to collocation as well.

^{6/} NTIA believes that these negotiations ought to establish not only network interconnection and unbundling arrangements and the price terms for those arrangements, but also self-executing penalties for failure to comply with a party's provisioning and performance obligations under an agreement. See Comments of the Association of Local Telecommunications Services.

^{7/} Notice ¶ 50. See also Comments of the United States Department of Justice at 9-12 (DOJ Comments).

^{8/} DOJ Comments at 12.

^{9/} See, e.g., Notice ¶¶ 30, 50, 79. See also DOJ Comments at 13.

^{10/} Notice ¶¶ 31, 32; DOJ Comments at 12, 14.

sufficient latitude to conduct and conclude the negotiations that Congress intended would drive the development of local telephone service competition. There is, in all likelihood, a wide range of interconnection agreements that can effectively satisfy the needs of the parties to those agreements and the interests of their current and prospective customers. The national framework adopted in this proceeding must give private firms a full opportunity to pursue such agreements, while creating incentives for them to negotiate in good faith and to reach mutually acceptable outcomes.

The national framework should also foster a dynamic environment in which the Commission and State commissions act collaboratively to achieve the Act's goals. The Act entrusts the Commission with important new responsibilities to ensure that all U.S. telecommunications markets are opened to competition. But the Act gives State commissions the lead in supervising (and, in some cases, concluding) the private interconnection agreements that will give rise to local competition. State regulators have gained valuable experience and insights as they have worked to create entry opportunities for new providers of local telecommunications services, particularly concerning the types of interconnection arrangements that are both feasible and necessary to make local entry viable.

The Commission should therefore develop a policy framework that takes advantage of the combined experience of Federal and State regulators in matters of interconnection and unbundling and -- more fundamentally -- enlists the States in the implementation of the Act's provisions. By so doing, the Commission will ensure that its new regulations not only satisfy the Act's procedural timetables, but also create a dynamic process that can help achieve the Act's central objective -- meaningful and lasting competition in the local telecommunications service market.

II. IMPLEMENTATION OF THE ACT'S INTERCONNECTION AND UNBUNDLING PROVISIONS

Section 251 imposes three fundamental obligations on ILECs:^{11/} (1) to interconnect with other telecommunications carriers at any "technically feasible point" on just, reasonable, and nondiscriminatory terms;^{12/} (2) to afford requesting carriers access to network elements on an unbundled basis at any technically feasible point on just, reasonable, and

^{11/} The term "ILEC" includes the BOCs and GTE, which together serve about 86 percent of the nation's 157.9 million access lines. See United States Telephone Ass'n, Phone Facts 1995, at 3, 10. It also encompasses the more than 1300 other companies that have historically provided local telephone service to the remainder of the country. Act § 251(h)(1). The Act empowers the Commission to classify other telecommunications service providers with certain characteristics as ILECs. Id. § 251(h)(2). At this time, however, no alternative provider appears to meet the statutory criteria for being categorized as an ILEC. Until a competing carrier has been classified as an ILEC, it should not be subject to the additional obligations that the Act imposes only on ILECs. See Notice ¶ 45; DOJ Comments at 22-23.

^{12/} Act § 251(c)(2).

nondiscriminatory terms;^{13/} and (3) to offer for resale at wholesale rates any telecommunications service made available at retail.^{14/} The Act charges the Commission with establishing regulations to implement those requirements.^{15/}

13/ Act § 251(c)(3). As the Commission points out, Congress clearly intended that the term "network element" includes both "a facility or equipment used in the provision of a telecommunications services" as well as "features, functions, and capabilities that are provided by means of such facility or equipment." Notice ¶ 83 (quoting Act § 153(29) and Joint Explanatory Statement, supra note 4, at 116).

14/ Id. § 251(c)(4). An ILEC has a general duty to negotiate in good faith to reach agreements that particularize those basic three obligations. Id. § 251(c)(1). NTIA believes that the responsibility to bargain in good faith means, at a minimum, that an ILEC must enter into negotiations without preconditions. As the Notice indicates, some ILECs have allegedly refused to commence talks "until the requesting carrier satisfies certain conditions, such as signing a nondisclosure agreement, or agreeing to limit its legal remedies in the event that negotiations fail." Notice ¶ 47. The Commission should state unequivocally that any attempt to impose such preconditions will be considered a breach of an ILEC's duty to negotiate in good faith.

15/ Act § 251(d)(1). The Commission asks whether its rules should apply to both interstate and intrastate aspects of interconnection, unbundling, and resale. Notice ¶¶ 37-39. Section 251(c)(2) obligates ILECs to interconnect with other carriers so that the latter can offer, among other things, telephone exchange service -- the quintessential intrastate offering. Similarly, Section 251(c)(4) requires ILECs to permit resale of any of their telecommunications services, not just their interstate ones. In short, Congress plainly intended that the Federal implementing regulations commanded by Section 251(d) would affect intrastate as well as interstate services.

Furthermore, the structure of Section 252, which mandates carrier-to-carrier negotiations and government oversight of those negotiations, makes no sense if the obligations of Section 251 are limited to interstate services. Section 252 gives State commissions the primary role in supervising the bargaining process, subject to Federal guidelines. If the negotiations concerned interconnection, unbundling, and resale solely with respect to interstate services, a State role would be unnecessary
(continued...)

In the Notice, the Commission solicits views on the nature of those implementing regulations. In particular, it seeks comment on the wisdom of adopting "explicit," "uniform," "specific" national rules concerning an ILEC's interconnection and unbundling responsibilities.^{16/} In response, a number of parties have urged the Commission to designate a detailed and fixed minimum set of technically feasible interconnection points and unbundled network elements. AT&T and MCI, for example, have advocated that the Commission require the unbundling of 11 and 13 specific network elements, respectively.^{17/}

Notwithstanding the potential benefits of such an approach, NTIA recommends a national framework that is more dynamic and expansive in approach. As the Commission recognizes, detailed Federal standards could actually limit States' ability to experiment with alternative, yet nonetheless pro-competitive, approaches to interconnection and unbundling or to broker

^{15/} (...continued from preceding page)
and inappropriate because regulation of those services have always been the exclusive province of the Commission. Congress' blueprint of joint Federal and State action in this area evinces its expectation that an ILEC's interconnection, unbundling, and resale responsibilities under Section 251 would extend to both their interstate and intrastate offerings.

^{16/} See Notice ¶¶ 27, 50-51.

^{17/} See *id.* ¶ 32.

interconnection agreements that better match local technological, geographic, or demographic conditions.^{18/}

As importantly, Commission-established static, minimum requirements, even if periodically reviewed and revised,^{19/} will almost by their very nature be underinclusive, because at any point in time the Commission cannot anticipate all possible forms of interconnection and unbundling. The potential adverse effects of a static approach will become particularly acute in future years as the range of feasible interconnection points and unbundled network elements expands and the benefits of local competition become more apparent and more widely enjoyed.

^{18/} Id. ¶ 33. Although Congress has expressed its commitment to a national policy framework, the procedures that Congress established for concluding interconnection agreements will tend toward variation in outcome, rather than uniformity. As noted above, the quest for such agreements will begin with voluntary negotiations between myriad private firms. If the parties cannot agree, the scene shifts to State regulatory commissions for arbitration with, perhaps, subsequent review by one of many Federal courts. See Act § 252(a), (b), (e)(6). In instances where a State commission refuses to arbitrate a disagreement between the parties to a negotiation, the Commission may assume jurisdiction in the State's place. Id. § 252(e)(5). That process clearly does not contemplate establishment of a single model interconnection agreement.

Court review of disputed State-approved interconnection agreements might provide an opportunity for the Commission to impress some consistency on the results of that process. The Act provides that, upon review of State-approved agreements, a Federal court must "determine whether the agreement . . . meets the requirements of section 251 and [section 252]." Id. § 252(e)(6). As the expert agency charged with administering the Act, the Commission would seem best equipped to assist the court in making that determination. Thus, the Commission should seek to intervene in any such appeal.

^{19/} See Notice ¶ 57.

There is the further risk that any fixed "floor" for interconnection and unbundling would become a ceiling as well. Given that some ILECs may not be eager to complete interconnection agreements that will begin or speed the erosion of their local service monopolies,^{20/} they may use the Federal minimums as a shield to ward off requests for additional interconnection/unbundling. In such cases, further progress could be stymied until the Commission completed proceedings to adopt additional requirements.

To avoid these potential difficulties, NTIA recommends that the Commission adopt a more dynamic approach to interconnection and unbundling, similar to that adumbrated in certain parts of the Notice.^{21/} This approach would operate as follows: First, the Commission would establish basic minimum interconnection and unbundling standards. In this regard, NTIA agrees with the Commission that, with respect to unbundling, the Act requires

^{20/} See, e.g., DOJ Comments at 9-10. The Act assumes that the prospect of interLATA entry will attract the BOCs to the bargaining table. That carrot will obviously be ineffective against the hundreds of ILECs that are presently free to provide long distance services. Furthermore, it is far from clear that all of the BOCs value the provision of interLATA services more highly than the protection of their lucrative local service markets. See, e.g., Telecommunications Reports, May 20, 1996, at 12 (detailing Southwestern Bell's attempts to overturn a Texas Public Utilities Commission order facilitating competitive local entry by Teleport Communications). Finally, interLATA entry remains an inducement, if at all, only so long as entry is denied. Once a BOC gains authority to provide long distance services, it may reassess its willingness to negotiate additional interconnection agreements.

^{21/} E.g., Notice ¶¶ 29, 58-59, 80.

ILECs to provide reasonable and nondiscriminatory access to at least four network elements -- local loops, local switching, local transport and special access, and databases and signalling systems.^{22/}

Further, the Commission effectively has mandated the unbundling of special access and local transport in its Expanded Interconnection proceeding.^{23/} There is no reason to reverse that decision. The Commission also has concluded tentatively, based on decisions by several State commissions, that it is technically feasible and desirable to unbundle further local loops.^{24/} Given the Act's strong bent towards competition, NTIA believes that the impetus should be in favor of more unbundling, not less. There is, however, enough variability among ILECs' networks and different perceptions among the States about the feasibility of opening those networks that it will be difficult for the Commission to make definitive judgments about the appropriateness of imposing numerous additional requirements at this time. NTIA believes that these tensions can be reconciled by an approach centered on State-by-State determinations, guided by national pro-competitive principles.

^{22/} See id. ¶¶ 94, 98, 104-105, 107.

^{23/} Id. ¶ 104.

^{24/} Id. ¶ 97.

This brings us to the second component of NTIA's proposal. If (1) a State commission has ordered an ILEC to provide interconnection at a particular point or to unbundle a certain network element or (2) an ILEC has voluntarily offered to provide additional interconnection or unbundling, the Commission should create a rebuttable presumption that it is technically feasible for ILECs in any other part of the country to provide that same type of interconnection or that network element to any requesting carrier.^{25/} An ILEC faced with such a request would have an opportunity (in the event that the parties did not reach a mutually acceptable resolution of the matter) to persuade the relevant State commission^{26/} by clear and convincing evidence that offering the requested interconnection or network element is not technically feasible.^{27/} By allowing for the possibility

^{25/} The presumption should apply not only to the availability of facilities, but also to provisioning arrangements, such as installation, maintenance, repair, and the imposition of non-recurring charges. See id. ¶ 61.

As indicated in the Notice, a number of States have already ordered or are considering whether to order further unbundling of switching, signalling, and database functions beyond the level required by the Act or proposed by the Commission. Id. ¶¶ 100, 109. Under NTIA's proposal, a prospective entrant in another State could rely on those decisions to request similar subelements from the serving ILEC. This provides a clear example of how a policy framework that enlists State commissions in the determination of appropriate interconnection and unbundling requirements could produce more interconnection and unbundling than one that relies solely or primarily on Commission action.

^{26/} The Commission would, of course, arbitrate the disagreement in the event that the State commission declined to do so.

^{27/} Cf. Notice ¶ 58 (suggesting that in the event of a dispute over interconnection, "the incumbent LEC has the burden of
(continued...)

that actions in one State will create interconnection and unbundling opportunities in other States that exceed the national minimums, without Commission intervention, this approach will substantially mitigate concerns that those minimums could also become maximums.

NTIA expects proceedings at the State level to make available a steadily increasing range of interconnection points and unbundled network elements available to competitive entrants in a growing number of jurisdictions.^{28/} The Commission would further this process by periodically supplementing its minimum interconnection/unbundling standards with additional requirements as a broader range of interconnection arrangements or network elements become commonplace throughout the nation. States have accomplished much already with respect to interconnection and unbundling and there will probably be many private negotiations concluded in the coming months. NTIA therefore believes that the Commission's first review of its minimum interconnection and

^{27/} (...continued from preceding page)
demonstrating that interconnection at a particular point is technically infeasible").

In addition, the Commission correctly concludes that any party alleging harm to the network from the provision of requested interconnection points should be required to present detailed information to support claims of network harm. *Id.* ¶ 56.

^{28/} As States and negotiating carriers move beyond the minimum requirements, NTIA expects that the industry will and should step forward to test and to standardize additional interconnection points and unbundling arrangements as they become more commonly available in a growing number of markets.

unbundling requirements should occur no later than one year after it promulgates rules in this proceeding. Subsequent reviews should then be conducted every one or two years thereafter.

Under the foregoing approach, the Commission could ensure that new entrants benefit from the development of a continually-increasing, common set of interconnection and unbundling arrangements throughout the country, without having to engage in lengthy and potentially costly negotiations.^{29/} At the same time, States would be permitted, indeed encouraged, to mandate additional unbundling and interconnection requirements based on particular local market conditions and the agreements concluded by private parties. Thus, NTIA's framework would create a partnership between Federal and State regulators that would allow them to bring their combined expertise and experience to bear on the question of how interconnection and unbundling standards or requirements can best be used to foster increased competition in the provision of local telephone services.

NTIA's proposed approach is consistent with the letter and spirit of the Act because it involves the Commission, State commissions, and private negotiators in defining an ILEC's interconnection and unbundling obligations. Moreover, in

^{29/} As networks evolve due to interconnection/unbundling agreements and other improvements, strong and effective network and information disclosure rules will play an even more important role in promoting the development of competition. See Notice 99-189-193.

expanding the number of actors involved in determining such obligations, NTIA's proposal ensures that the process will be dynamic and not unduly affected by the decisions of a single entity. Although NTIA's approach will not eliminate local or, perhaps, regional variation in the interconnection/unbundling requirements prescribed, it will create a trajectory of increasing interconnection and unbundling obligations, with all of the competitive benefits that such a path is likely to generate.

III. PRICING OF INTERCONNECTION AND UNBUNDLED NETWORK ELEMENTS

If Section 251's interconnection and unbundling provisions are designed to promote competition, the pricing of network interconnection and unbundled network elements will determine to a large extent how effective Section 251 will be in achieving that objective. Generally speaking, the Act requires that the rates established for interconnection or for network elements should be: (1) nondiscriminatory and (2) based on the costs of providing such interconnection or element, including a reasonable profit.^{30/} The Notice seeks comment on how best to ensure compliance with that standard.

^{30/} Act § 252(d)(1). The Act's specification that rates may provide a reasonable profit is somewhat redundant because conventional economic measures of "cost" assume a reasonable or "normal" profit.

NTIA agrees with the Commission and the Department of Justice that the Commission should establish a minimum set of principles governing the pricing of interconnection and unbundled network elements.^{31/} As the Commission points out, Section 251(d) of the Act requires the Commission to adopt regulations to implement the statutory requirements for ILECs to provide interconnection and unbundling on "just, reasonable, and nondiscriminatory" terms.^{32/} Nationwide pricing principles would furnish a certain and consistent benchmark for assessing ILECs' compliance with that fundamental obligation.

Commission-prescribed pricing principles would also serve the Act's overriding pro-competitive goals in the same way as a national framework with respect to interconnection and unbundling. They would, for example, increase the predictability of interconnection and unbundling pricing, making it easier for new entrants to develop their business plans and facilitating negotiation, arbitration, and review of interconnection agreements between entrants and ILECs.^{33/} At the same time, national pricing principles would not encroach upon the rights of State commissions because they would retain responsibility for applying those principles (in contested negotiations) to

^{31/} Notice ¶¶ 39-40; DOJ Comments at 24-26.

^{32/} Notice ¶ 117 (citing Act §§ 251(c)(2), (c)(3)).

^{33/} DOJ Comments at 25; Notice ¶ 40.

establish or to approve specific prices in particular circumstances.^{34/}

We should emphasize here that any pricing principles adopted by the Commission should give negotiating parties every opportunity to reach mutually acceptable agreements with respect to price as well as other network interconnection and unbundling details. In the event that negotiating parties fail to reach agreement, the State regulator should establish the appropriate price for the interconnection to be provided, based on specific Commission-prescribed guidelines that embody the pricing objectives described below.

A. General Pricing Principles

In establishing national principles for pricing interconnection arrangements and unbundled network elements, the Commission's central objective should be that identified by Congress -- to ensure that the rates for those offerings reflect underlying costs. Regulations that govern telecommunications service pricing should be designed to produce service prices equal to the opportunity costs society incurs from having its scarce resources devoted to the production of these services.^{35/}

^{34/} DOJ Comments at 25.

^{35/} Prices should be based upon "forward looking" costs -- the expenditures that a business will incur or avoid as a result of future decisions. "Economically efficient pricing looks not to the past -- not to how we got where we are -- but to the future; (continued...)

Policies that deviate from this basic principle will send incorrect price signals and thereby distort ILEC and new entrants' investment decisions, as well as consumer purchases, in a manner that harms society's economic welfare.^{36/}

On the one hand, requiring ILECs to establish prices that are below the true costs of providing their services will likely encourage excessive entry by resellers in the short run, thereby expanding service consumption beyond the economically efficient point. Below-cost pricing also may not allow ILECs to make economically efficient investments in telecommunications infrastructure. On the other hand, allowing ILECs to price services above costs will retard entry by resellers, depress service consumption relative to the economic optimum, and invite economically inefficient facilities-based competitive entry.

Establishing a set of economically efficient prices is complicated by at least two factors. First, provision of telecommunications services appears to be characterized by

35/ (...continued from preceding page)
efficiency requires that prices tell customers what incremental resources society will use if they take more of the good or service in question, what resources society will save if they consume less of it." Alfred Kahn and William Shew, Current Issues in Telecommunications Regulation: Pricing, 4 Yale J. on Reg. 191, 224 (1987) (Kahn and Shew).

36/ The extent of this "allocative" distortion depends upon the level of usage and investment either stimulated or stifled by inefficient pricing.

significant joint and common costs.^{37/} There is no easy way to apportion such "shared" costs among the services involved so as to establish the "true" costs of providing each service. Second, setting efficient prices requires considerable information on underlying costs that are typically within control of the serving ILEC, rather than the relevant regulator. The ILEC obviously has no strong incentive to reveal private cost information that may do it harm.

B. TSLRIC: An Analysis

Given the asymmetry in cost information between regulators and regulated firms, the Commission should not sanction any costing methodology that relies heavily on ILEC-provided information. A number of commenters in this proceeding have proposed an alternative approach, referred to as total service long run incremental cost (TSLRIC). Because TSLRIC cost estimates are not based on ILEC-provided information, NTIA believes that they can be very useful to the Commission and State regulators in securing efficient and pro-competitive prices for interconnection and unbundled network elements. As discussed below, TSLRIC can be particularly valuable if employed as a lower bound with which to structure negotiations.

^{37/} See, e.g., Kahn and Shew, supra note 35, at 194. Joint costs are expenditures that are incremental to a group of services, but not to any particular service within that group. Common costs are expenditures that, at least in theory, can be attributable to a particular service.

In their most basic form, however, TSLRIC estimates alone may not be sufficient to accomplish the regulator's pricing objective -- fostering competition through interconnection rates that accurately reflect input costs.^{38/} For instance, as NARUC correctly notes, "because some shared costs are not included in the calculations of TSLRIC, a firm that collects only TSLRIC from all of its services will not be able to cover its total costs, including overheads, and could not remain viable over the long term."^{39/40/}

^{38/} Cf. DOJ Comments at 30 ("If the prices that competing carriers pay for their inputs are distorted from the true economic costs of those inputs, those prices will lead carriers to choose technologies that will minimize their use of overpriced but lower cost inputs, thus impairing the quality or increasing the cost of their service offering"). This implies that if prices are below the "true economic costs" of inputs, carriers will choose technologies that maximize their use of underpriced but higher cost inputs.

^{39/} See id. at 35. Hatfield's TSLRIC model does attempt to account for some administrative overhead:

Certain costs that vary with the size of the firm, and therefore do not meet the economist's definition of overhead, are often included under the classification of General and Administrative expenses. For example, if a LEC did not provide loops, it would be a much smaller company, and would therefore have lower costs. Some of those costs are attributed to overhead under current LEC accounting procedures. We therefore include a portion of these "overhead" costs in our TSLRIC estimates.

Historical overhead expenses for the LECs, such as administration, planning, legal, and human resources seem excessive when compared to firms that operate in a competitive environment. The relationship between revenues and overhead for selected firms in the auto manufacturing and airline industries was examined. A six percent overhead loading factor was found for these industries. The cost of the functions that this factor is used to estimate should not vary widely across industries. In other words, the relationship between

(continued...)

39/ (...continued from preceding page)
 revenues and administration, planning, legal, and human
 resources are likely to be similar in the
 telecommunications industry.

Hatfield Associates, Inc., The Cost of Basic Network Elements:
 Theory, Modeling and Policy Implications 30 (March 1996)
 (prepared for MCI Telecommunications Corp.)

We note that by defining shared costs as not being
 incremental to any one service, we do not imply that these costs
 are invariant to the size of the firm, as Hatfield contends. It
 is also unclear how sensitive Hatfield's TSLRIC estimates are to
 changes in the six percent overhead factor. To the extent that
 Hatfield excludes some shared costs or its six percent factor
 underestimates true overhead costs in telecommunications, its
 TSLRIC model may underestimate the ILECs' costs.

40/ Economists generally agree with NARUC's assessment that
 TSLRIC prices do not cover all of the ILECs' joint and common
 costs. For example, Harris and Yao note that

In addition to TSLRIC, LECs also have shared costs
 which are incurred for facilities and resources used in
 the production of two or more services, and can
 therefore not be eliminated by the discontinuation of a
 single service. Examples of shared costs include fiber
 strands used for transport services, and stand-by
 modular switching capacity. These shared costs are
 incurred whenever LECs provide services to end-users
 and should therefore be reflected in retail, wholesale,
 unbundled network element and call termination prices.
 Some portion of common costs also need to be recovered.
 Common costs are incurred through facilities and
 resources used in the production of all the LECs
 services.

Robert Harris and Dennis Yao, Federal Implementation of the
 Telecommunications Act of 1996: Competition in the Local
 Exchange 18 (May 1996) (Attached to Comments of US West, Inc.)
 (Harris and Yao). Harris and Yao used the term shared costs in
 the way that we (and NARUC) use the term joint costs. We use the
 term shared cost to refer to both joint and common costs.

Potential interconnectors acknowledge that joint and common
 costs are part of the long-run incremental costs of a service
 that should be recovered. They are legitimately concerned
 nevertheless, about an IEC's' incentives to overstate those
 costs. As AT&T puts it:

(continued...)